

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK1016

Security Bay, Southeast Alaska

Introduction

Coastal Mapping Program (CMP) Project AK1016 provides coastal zone mapping data of Security Bay located in Frederick Sound in southeastern Alaska. This data covers the entirety of Security Bay. The Geographic Cell (GC) may be used in support of the NOAA Nautical Charting Program (NCP) and coastal zone management activities. Project survey data is referenced to the North American Datum of 1983 (NAD 83).

Project Design

This project was designed per a request from the Hydrographic Surveys Division (HSD) of the Office of Coast Survey within NOAA for cartographic data in support of HSD operations. Based on an analysis of project requirements and results of a source data search, it was determined that CMP procedures for multiple sources would apply for this project. Available source data deemed adequate for successful completion of this project included sources acquired in June 2003.

Field Operations

Routine CMP field operations did not apply for this project based on the origin of the project source data.

Aerotriangulation

The aerotriangulation task was accomplished by RSD personnel in September 2012. Aerotriangulation procedures were completed on a Digital Photogrammetric Workstation using the Multi-Sensor Triangulation (MST) Tool of SOCET SET version 5.6. The Interactive Point Measurement tool within MST was used to collect several tie points and a simultaneous solve adjustment was then performed, forecasting an average predicted horizontal circular error for all well defined points in this project area of 7 meters at the 95% confidence level. Positional data for this project is referenced to the North American Datum of 1983 (NAD 83).

Compilation

Digital feature data compilation for this project was accomplished by RSD personnel in October 2012. The Feature Extraction tool within SOCET SET was used during the digital feature data compilation phase of project completion. Feature attribution was assigned in compliance with the Coastal Cartographic Object Attribute Source Table (C-COAST), which provides the definition and attribution scheme for the full range of

cartographic features pertinent to the CMP. Selected features were further modified with additional descriptive information to refine general classification.

Cartographic features were compiled to meet a horizontal accuracy of 10 meters at the 95% confidence level. Verified water levels were obtained from the NOS reference tide station at Juneau, Alaska, and time and height offsets were applied to the Saginaw Bay tidal substation in the project area. The height of the mean high water (MHW) tidal datum in the project area is 3.9 meters above mean lower low water (MLLW). The water level at the times the source images were acquired was 0.6 meters above MLLW.

Quality Control / Final Review

RSD personnel conducted quality control (QC) tasks during all phases of project completion. The final QC review was completed in October 2012. The review process included analysis of aerotriangulation results and assessment of the identification and attribution of digital feature data within the GC according to image analysis and criteria defined in C-COAST. The quality control process concluded with an inspection of topological connectivity within the GC using ArcGIS 10 software. All project data was evaluated for compliance to CMP requirements.

Comparisons of the largest scale NOAA nautical charts with source imagery and compiled project data resulted in creation of the Chart Evaluation File (CEF). The following nautical charts were used in the comparison process:

- 17320, Coronation Island to Lisianski Strait, 1:217,828 scale, 18th Ed.
- 17368, Keku Strait, Northern Part, 1:40,000 scale, 7th Ed.

End Products and Deliverables

The following specifies the location and identification of the products generated during the completion of this project:

RSD Applications Branch Archive

- Hardcopy of the Project Completion Report (PCR)
- Page-size graphic plot of GC10948 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project database
- GC10948 in shapefile format
- Digital copy of the PCR in Adobe PDF format
- CEF in shapefile format

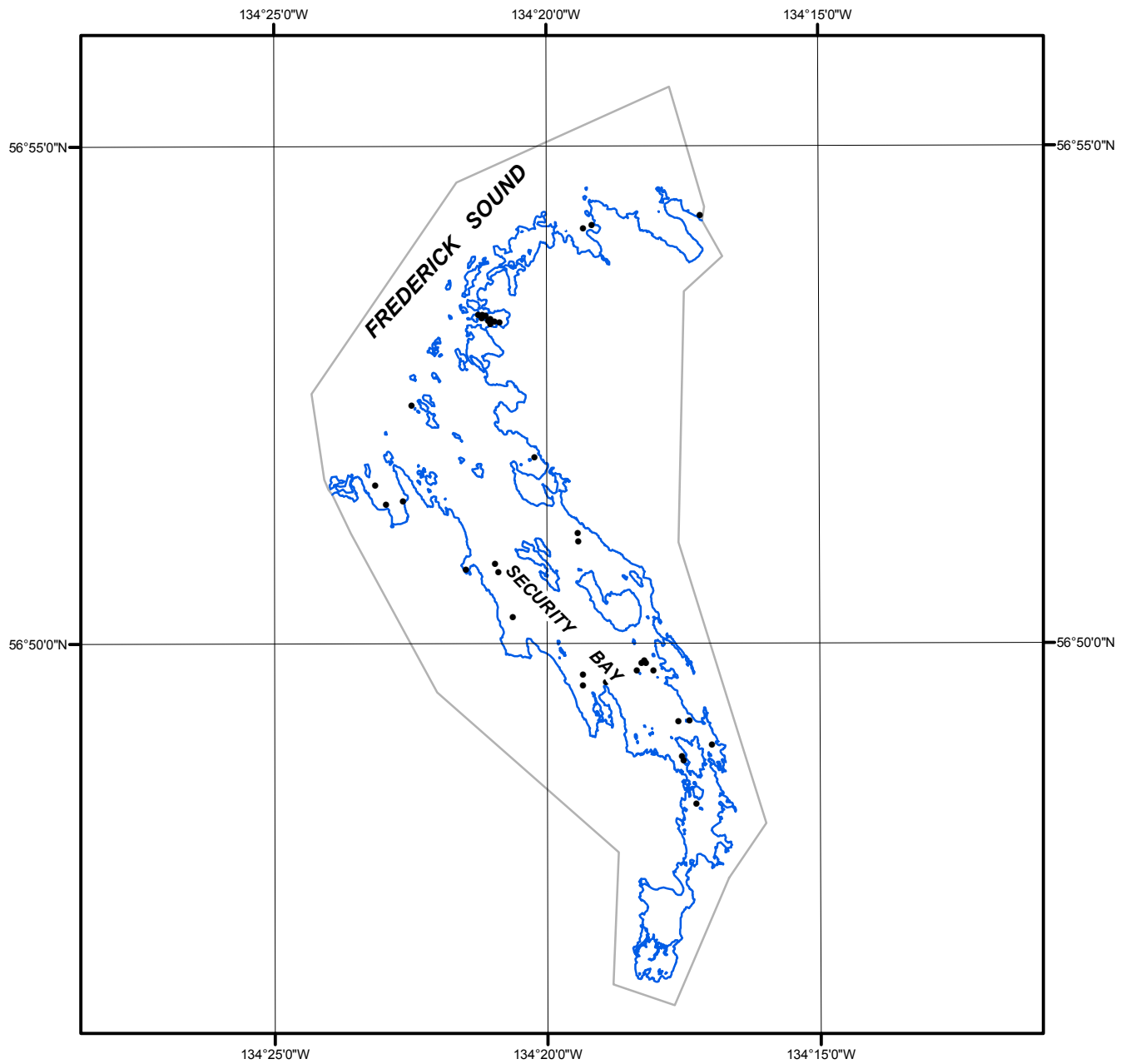
NOAA Shoreline Data Explorer

- GC10948 in shapefile format
- Metadata file for GC10948
- Digital copy of the PCR in Adobe PDF format

End of Report

SECURITY BAY

ALASKA



Overview



AK1016

GC10948